Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION, DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED DISORDERS AND OTHER DISORDERS

DISORDERS AND OTHER DISORDERS
Attorney/Agent: Kerri Pollard Schray
Docket No.: MP199-130P1RCN1M

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田冈民	MGPTLAVPTPYGCIGCKLPQPEYPPALIIFMFCAMVITIVVDLIGNSMVILAVTKNKKLRNS MATVPKSNMGPTKAVPTPFGCIGCKLPKPDYPPALIIFMFCAMVITVVVDLIGNSMVILAVTKNKKLRNS 
田阿瓦	GNIFVVSLSVADMLVAIYPYPLMLHAMSIGGWDLSQLQCQMVGFITGLSVVGSIFNIVAIAINRYCYICH GNIFVASLSVADMLVAIYPYPLMLYAMSVGGWDLSQLQCQMVGLVTGLSVVGSIFNITAIAINRYCYICH
田岡民	SLQYERIFSVRNTCIYLVITWIMTVLAVLPNMYIGTIEYDPRTYTCIFNYLNNPVFTVTIVCIHFVLPLL SLQYKRIFSLRNTCIYLVVTWVMTVLAVLPNMYIGTIEYDPRTYTCIFNYVNNPAFTVTIVCIHFVLPLI SLQYNADLQPANTCIYLVVTWVMTVLDVLPNVYIGTIEYDPRTYTCYFNYVNNPAFTVTIVCIHFVLPLI
田四民	IVGFCYVRIWTKVLAARDPAGONPDNQLAEVRNFLTMFVIFLLFAVCWCPINVLTVLVAVSPKEMAGKIP IVGYCYTKIWIKVLAARDPAGONPDNQFAEVRNFLTMFVIFLLFAVCWCPVNVLTVLVAVIPKEMAGKIP IVGYCYTKIWIKVLADRDPAGONPDNQFAEVRNFLTMFVIFLL
田冈民	NWLYLAAYFIAYFNSCLNAVIYGLLNENFRREYWTIFHAMRHPIIFFPGLISDIREMQEARTLARARAHA NWLYLAAYCIAYFNSCLNAIIYGILNESFRREYWTIFHAMRHPILFISHLISDIRETWETRALTRARVRA 
田田民	RDQAREQDRAHACPAVEETPMNVRNVPLPGDAAAGHPDRASGHPKPHSRSSSAYRKSASTHHKSVFSHSK RDQVREQERARACVAVEGTPRNVRNVLLPGDASAPHSDRASVRPKPQTRSTSVYRK

Fig. 14

Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION, DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED

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AASGHLKPVSGHSKPASGHPKSA-TVYPKPASVHFKGDSVHFKGDSVHFKPDSVHFKPASSNPKPITGHH PASIHHKSISGHPKSASVYPKPASSVHCKPASVHFKPASVHFKGDSVYFKGDTVHYRAAS---KLVTSHR VSAGSHSKSAFSAATSHPKP----IKPATSHAEPTTADYPKPATTSHPKPAAADNPELSASHCPEIPAIA ISAG------PSTSHPTSMAGYIKSGTSHPATTTVDYLEPATTSHSVLTAVDLPEVSASHCLEMTSTG HPVSDDSDLPESASSPAAGPTKPAASQLESDTIADLPDPTVVTTSTNDYHDVVVVD----VEDDPDEMAV HLRAD----ISASVLPSVPFELAATP-----PDTTAIPIASGDYRKVVLIDDDSDDSDCSDEMAV 1 田田民 田冈民 田冈民

**Title:** COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION, DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED

DISORDERS AND OTHER DISORDERS Attorney/Agent: Kerri Pollard Schray

Docket No.: MP199-130P1RCN1M Sheet 3 of 19 GATGGTTATCACCATCGTTGTAGACCTAATCGGCAACTCCATGGTCATTTTGGCTGTGACGAAGAACAAGAAGCTCCGGAATTCT GGCAACATCTTCGTGGTCAGTCTCTCTGTGGCCGATATGCTGGTGGCCATCTACCCATACCCTTTGATGCTGCATGCCATGTCCA TTGGGGGCTGGGATCTGAGCCAGTTACAGTGCCAGATGGTCGGGTTCATCACAGGGCTGAGTGTGGTCGGCTCCATCTTCAACAT CGTGGCAATCGCTATCAACCGTTACTGCTACATCTGCCACAGCCTCCAĞTACGAACGGATCTTCAGTGTGCGCAATACCTGCATC GTTCGCAATTTTCTAACCATGTTTGTGATCTTCCTCCTCTTTGCAGTGTGCTGGTGCCCTATCAACGTGCTCACTGTCTTGGTGG TTCTTCCCTGGCCTCATCAGTGATATTCGTGAGATGCAGGAGGCCCGTACCCTGGCCCGGCGCCCGTGCCCATGCTCGCGACCAAG CACCACAAGTCTGTCTTTAGCCACTCCAAGGCTGCCTCTGGTCACCTCAAGCCTGTCTCTGGCCACTCCAAGCCTGTCTGGTC ACCCCAAGTCTGCCACTGTCTACCCTAAGCCTGCCTCTGTCCATTTCAAGGGTGACTCTGTCCATTTCAAGGGTGACTCTGTCCA TITCAAGCCIGACTCIGIICAIITTCAAGCCIGCIICCAGCAACCCCAAGCCCAICACIGGCCACCAIGICITCIGCIGGCAGCCAC TACCTGGTCATCACCTGGATCATGACCGTCCTGGCTGTCCTGCCCAACATGTACATTGGCACCATCGAGTACGATCCTCGCACCT CAACGCTGTGATCTACGGGCTCCTCAATGAGAATTTCCGAAGAGAATACTGGACCATCTTCCATGCTATGCGGCACCCTATCATA TCCAAGTCTGCCTTCAGTGCTGCCACCACCACCTAAACCCATCAAGCCAGCTACCAGCCATGCTGAGCCACCACCACCAGCTGATGT ATCCCAAGCCTGCCACTACCAGCCACCCTAAGCCCGCTGCTGCTGACAACCCTGAGCTCTCTGCCTCCCATTGCCCCGAGATCCC TGCCATTGCCCACCTGTGTGTGTGACGACAGTGACCTCCCTGAGTCGGCCTCTAGCCCTGCCGCTGGGCCCACCAAGCCTGCTGCC AGCCAGCTGGAGTCTGACACCATCGCTGACCTTCCTGACCCTACTGTAGTCACTACCAGTACCAATGATTACCATGATGTCGTGG CTGTCAGTCCGAAGGAGATGGCAGGCAAGATCCCCAACTGGCTTTATCTTGCAGCCTACTTCATAGCCTACTTCAACAGCTGCCT TTGTTGATGTTGAAGATGATCCTGATGAAATGGCTGTGTGAAAAAAATGCTCCTCGTAGGTGGCCAGGCAGT

TGTTTGCTGTCTGGACCTGGCTGATCCTGAGCCTGCTGGGAGATCTTAACGATCCCCAGGAGCAACATGGGGGCCCACCTAG

TGCATTGGCTGTAAGCTGCCAAAGCCCGGACTACCCGCCAGCTCTAATCATCTTCATGTTCTGCGCAATGGTCATCACAGTCGTCG TAGACCTGATCGGGAACTCCATGGTCATTTTGGCTGTGACCAAGAACAAGAAGCTCCGAAATTCTGGCAACATCTTTGTGGCCAG CCTCTCTGTGGCAGACATGCTGGTGGCCATCTACCCCTACCCTTTGATGCTGTATGCCATGTCAGTTGGGGGGCTGGGATCTGAGT CAGCTCCAGTGCCAGATGGTCGGGTTGGTCACAGGACTGAGCGTAGTCGGTTCCATCTTCAACATTACTGCCATTGCCATCAACC CATGACTGTCCTGGCTGTCCTGCCTAACATGTACATTGGCACCATTGAGTATGACCCTCGCACCTACACCTGCATCTTCAACTAT STGAACAATCCTGCCTTTACCGTGACCATTGTCTGCATCCACTTCGTCCTCCTCTCTTCATCATGTTGGTTATTGCTACACGAAAA

<u> AAGATCCTGAGCTTGCCTGGGAGGAATGGCCACGGTCCCCAAGAGCAACATGGGACCTACAAAGGCGGTTCCCACCCCATTCGGC</u>

Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION. DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED

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4/19 TCTGGATCAAAGTGCTGGCAGCCCGTGACCCAGCTGGACAGAATCCTGACAACCAGTTTGCTGAGGTTCGAAATTTTCTAACCAT GTTTGTGATCTTCCTCCTTTTTGCAGTTGCTGGTGCCCTGTCAATGTGCTCACTGTGTGGTGGTGGCTGTCATTCCAAAGGAAATGG GATATICGGGAGACTIGGGAGACCCCGAGCTCTCACTCGTGCCCGTGTCCGTGATCAAGTCCGAGAGCAAGAGCGTGCTC CAGGCAAGATCCCCAACTGGCTTTATCTTGCAGCCTACTGCATAGCCTACTTCAACAGCTGCCTCAACGCCATCATCTACGGTAT GTGCCTGTGTCGCTGTGGAGGGGACCCCAAGGAACGTCCGGAATGTTCTACTGCCTGGTGATGCATCAGCACCCCACTCTGATCG TGCCTCTGTCCGTCCCAAGCCCCAAACCAGGTCTACTTCTGTCTACCGCAAACCTGCCTCTATCCACCACAAGTCTATTCTGGC TGACCAGCACTGGCCACCTCAGAGCTGACATTTCTGCCTCTGTCCTTCTGTACCCTTCGAGCTTGCTGCCACCCTCCTGA IACCACTGCAATCCCCATTGCCTCTGGTGATTACCGCAAGGTCGTGCTTATTGATGATGATTCTGATGATTCTGATTGCTCTGAT TTCATTTCAAGGGTGACTCTGTCTATTTCAAGGGAGACACTGTCCATTACAGGGCTGCTTCCAAACTTGTCACCAGTCACGGTAT SACTATCTCGAACCTGCCACCACCACCACTCTGTGCTCACTGCTGTCGACCTCCCTGAGGTCTCAGCCTCCCATTGCCTTGAGA SAGATGGCTGTGTG7

Fig. 21

Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION, DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED

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Fig. 2C

**PTGTGATCTTCCTCCTT** 

TGACTGTTCTGGATGTCCTGCCTAATGTGTACATTGGCACCATTGAGTATGACCCTCGCACCTACACCTGCTACTTCAACTATGT GAACAACCCTGCCTTTACTGTGACCATTGTCTGCATCCACTTCGTCCTCCTCTCATCATAGTCGGTTATTGCTACACAAAAATC TGGATCAAAGTGCTGGCAGACCGGGACCCAGCTGGACAGAATCCTGACAACCAGTTTGCTGAGGTTCGAAATTTTCTAACCATGT

Applicants: David White

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FIG. 3

Applicants: David White

Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION,
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Attorney/Agent: Kerri Pollard Schray

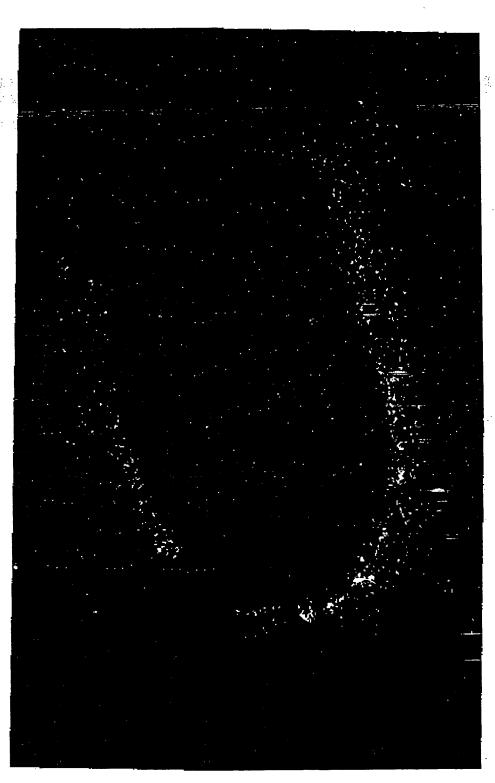
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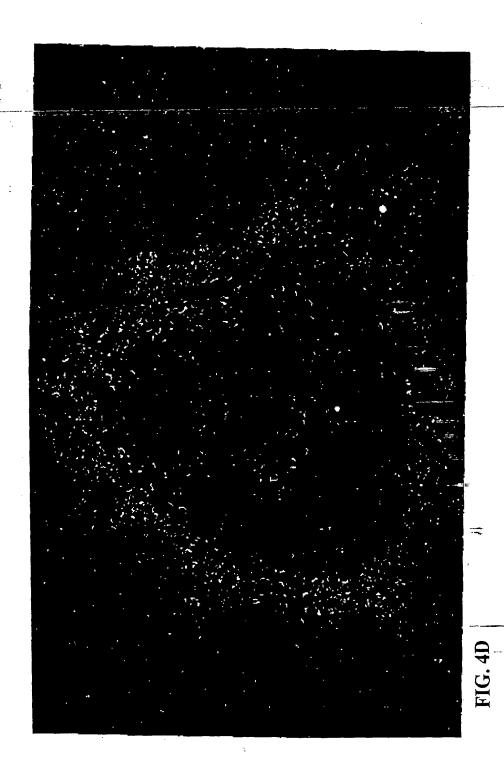
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241 58

U52219 MRR AA

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Title: COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION. DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED DISORDERS AND OTHER DISORDERS

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30712 ttcaggcaacatcttcgtggtcagtctctctgtggccgatatgctggtggccatctaccc	252 ttctggcaacatcttcgtggtcagtctctctgtggccgatatgctggtggccatctaccc 62 S G N I F V V S L S V A D M L V A I Y P	30772 ataccetttgatgetgeatgecatgtecattggggggetggggatetgagecagttacagtg	312 ataccetttgatgetgeatgeeatgteeattgggggetggggatetgageeagttacagtg	≯	30832 ccagatggtcgggttcatcacagggctgagtgtggtcggctccatcttcaacatcgtggc	372 ccagatggtcgggttcatcacagggctgagtgtggtcggctccatcttcaacatcgtggc $_{ m I}$ 102 Q M V G F I T G L S V V G S I F N I V A	
AF003625	U52219 MRR AA	AF003625	052219	MRR AA	AF003625	U52219 MRR AA	

Fig. 5B

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$\sim$ 1	612	
MRR AA	182	Y L N N P V F T V T I V C I H F V L P L

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AF003625	31132	ceteategtgggtttetgetaegtgaggatetggaccaaagtgetggeggeeegtgaeee
U52219 MRR AA	672 202	~ +J +J
AF003625	31192	acaaccaacttgctgag 
U52219 MRR AA	732 222	tgcagggcagaatcctgacaacttgctgaggttcgcaattttctaaccatgtttgt A G Q N P D N Q L A E V R N F L T M F V
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AF003625	31312	tgtcagtccgaaggagatggcaggcaagatccccaactggctttatcttgcagcctactt
U52219 MRR AA	852 262	tgtcagtccgaaggagatggcaggcaggcagcctacttgcagcctactt V S P K E M A G K I P N W L Y L A A Y F

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U52219	- م ع	
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U52219	972 ccgaagagaatactggaccatcttccatgctatgcggcaccctatcatattct	tccctgg
MRR AA	02	ы С
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U52219	llll 2 tgctc	aggaaac
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1152219	1452	
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	,	
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MRR AA	482	SHSKSAFSA
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MRR AA	502	I K P A T S H A E P T T A D Y P K P A T

Fig. 5G

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•		
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**Applicants:** David White **Title:** COMPOSITIONS, KITS AND METHODS FOR PROGNOSTICATION. DIAGNOSIS, PREVENTION, AND TREATMENT OF BONE-RELATED

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